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SOURCE Avtomobil'naya Promyshlennost', No 2, 1950.

THE KhtZ-7 TRACTOR

The KhTZ-7 tractor produced at the Kharkov Tractor Plant represents an original design of a universal wheel tractor capable of carrying out different operations in the following fields of agriculture: vegetable, berry, and fruit growing; forestation; cattle raising; field work (as an auxiliary tractor); and transport. Specifications follow:

Engine power - 12 hp

Calculated speeds, in km/hr:

1st gear	-	4.09
2d "	-	5.29
3d "	-	6.69
4th "	-	<u>12.73</u>

Gear ratios:

1st gear	-	80.87
2d "	-	62.56
3d "	-	49.5
4th "	-	25.98

(An auxiliary gear has a speed of 0.71 kilometer per minute and a ratio of 261.57 at 900 revolutions per minute.)

Delivered traction power, in hp:

On rubber tires on shallow stubble - 8.5
On steel wheels - 6.5

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Dimensions, in mm:

- a. Total length, orchard version - 2,550
- b. Total length, garden version - 2,330
- c. Total width with track at 1,000 mm - 1,264
- d. Height, at the radiator:
 - Orchard version - 1,313
 - Garden version - 1,106
- e. Longitudinal base:
 - Orchard version - 1,650
 - Garden version - 1,430
- f. Width of track (in fixed intervals) - 1,000 -- 1,100 -- 1,200 --
1,300 -- 1,400 -- 1,500
- g. Road clearance:
 - Orchard version - 520
 - Garden version - 313

Make of engine - KhTZ-B7

Type of engine - Carburetor, 4-cycle

Fuel - gasoline, 2d grade

Specific fuel consumption - 270 gram-ergs/hp-hr

Number of cylinders - 2

Cylinder diameter - 82 mm

Piston stroke - 125 mm

Number of rpm:

- Normal - 1,600
- Slow - 900

Governor - centrifugal, universal

Air cleaner - double cleaner with centrifugal dust catcher and oil filters

Cooling system - thermostat and shutters

Carburetor - K-14

Capacity of fuel tank - 14 liters

Fuel feed - gravity

Ignition system - high-voltage M-48 magneto

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Type of wheels:

- 1st variant - low-pressure rubber tires
- 2d variant - steel wheels

Wheel diameter, in mm:

- Front - 630
- Back - 213

Width of tire, in mm:

- Front - 112
- Back - 1,170

Range of front axle adjustment, in mm:

For height - 207 (by adjustment of split steering knuckles of front wheels)

For width - 1,000-1,400 (by extension of outside ends of telescopic front axle)

Range of rear axle adjustment, in mm:

For height - 207 (by moving gear box of side transmission from vertical to horizontal position)

For width - 1,000-1,500 (by readjustment of tire on rim of wheel and turning wheel around)

Trailing equipment - detachable, floating

Adjustment of trailing equipment, in mm:

- Height over the ground - 300-500
- In width - plus or minus 150

Generator - GBF 4105, 6 volts

Storage battery - 3-STE-65

Number of headlights:

- Front - two FG-7 lights
- Rear - one

Hydraulic lift for suspension-type agricultural equipment - NATI, type NS-12

Drive for power take-off shaft - from longitudinal shaft or auxiliary gear

Number of rpm of take-off shaft - 545

Take-off wheel:

- Diameter - 300 mm
- Width of rim - 120 mm
- Number of rpm - 914

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Location of wheel on tractor - right side at outside end of intermediate transmission shaft. Detachable.

From 8 May to 5 September 1949, the KhTZ-7 tractor was tested on different types of terrain in a wide range of operations. A table of comparative data on work and fuel consumption in basic operations during a given shift by KhTZ-7 and other basic tractor models is given below.

<u>Operation</u>	<u>SKhTZ</u>		<u>U-2</u>		<u>KhTZ-7</u>	
	<u>Shift Norm (ha)</u>	<u>Fuel Consumption per Ha (kg)</u>	<u>Shift Norm (ha)</u>	<u>Fuel Consumption per Ha (kg)</u>	<u>Shift Norm (ha)</u>	<u>Fuel Consumption per Ha (kg)</u>
Grain sowing	16.0	5	14.0	4.4	19.7	1.66
Row-crop cultivation	26.0	3.7	15.0	4.1	10.5	3.3
Cultivation on fallow fields	15.0	5.5	12.0	5.5	10.5	3.3
Harrowing	40.0	1.7	30.0	1.7	22.2	1.53
Grain harvesting with simple machines	14.5	4.6	13.0	4.6	12.4	2.52
Grass harvesting	21.6	4.7	16.0	3.5	12.0	2.56

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